EFFICIENT AND SUSTAINABLE TRANSPORTATION
RESIDENT ATTRACTION AND RETENTION
IMPROVED QUALITY OF LIFE
ECONOMIC DEVELOPMENT
PUBLIC HEALTH
EQUITY

BIKELAKEWOOD

DRAFT

Bicycle Master Plan
Adopted by Council: (TBD)

Acknowledgements

Thank you to the hundreds of residents that contributed to the plan. They are the authors and the reason this plan exists.

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BIKELAKEWOOD

Process of the Plan

Community Workshop #1
Main Library Auditorium
6:30-8:00 PM

- Biking Community profile/survey
- Route and facility needs Input

Update to Planning Commission and Council
City Hall Auditorium
7:00 PM

Community Workshop #3
Location TBD

October 5, 2010	October 31, 2010	November 4, 2010	November 9, 2010	December 2011	2012
October 2010: Lakewood Community Bike Survey Posted	2010-2011: Direct Observation & Study Period				

Bicycle and Pedestrian Counts Undertaken
October 2011

Existing Conditions and Needs Assessment Report

Community Workshop #2
Main Library Auditorium
6:30-8:00 PM

- Proposed Network Routes and facilities

Bicycle Master Plan Implemented

Executive Summary

Vision Statement & Goals

The vision of the Bicycle Master Plan is to establish bicycling as a main means of transportation and accommodate current bicyclists' needs through policies, programs & projects.

*The City's goal is to be nationally recognized as **one of the most bicycle friendly communities in the country by 2015** based on the standards set by the League of American Bicyclists (link). Bicycling promotes efficient land use, promotes efficient use of road space, promotes equitable transportation, supports buying local, promotes health and fitness, reduces air and noise pollution, reduces traffic congestion, reduces taxpayer burden, reduces parking demand, reduces energy use, and is an integral part of a progressive community.*

Why is Bicycle Planning Important in Lakewood?

We have a significant bicycling population.

Lakewood has a significant bicycling population of both transportation and recreational riders. According to the 2008 American Community Survey (ACS), **Lakewood ranks #1 in Ohio** for resident bike commuters in cities with less than 100,000 residents. For detailed information about our bike community, please refer to the bike survey in the Appendix.

We have a built environment that encourages bicycling.

Most of Lakewood is flat, densely-populated and was developed around streetcar lines, creating a compact layout that offers relatively short distances between schools, parks, residential areas and commercial centers. Most vehicle trips inside the City are less than five miles round trip and could be accomplished on a bicycle because of the city's layout.

But we can get better.

We can continue to improve the infrastructure that supports bicycling as a primary means of transportation in the city.

Benefits of a Well Designed Bike Network

- Improved Quality of Life
- Efficient and Sustainable Transportation
- Resident Attraction and Retention
- Public Health
- Equity
- Economic Development

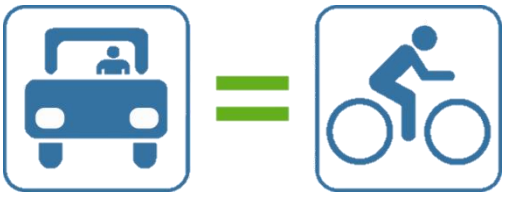
Purpose of the Plan

In the interest of achieving our goal and improving the cycling environment, the bicycle plan's purpose is to identify and then direct the implementation of a continuous network of cross-town routes and facilities and to recommend improvement priorities, funding opportunities and necessary policies. Such a network will then allow safe and convenient bicycle travel throughout the community for riders of all abilities, skills and objectives.

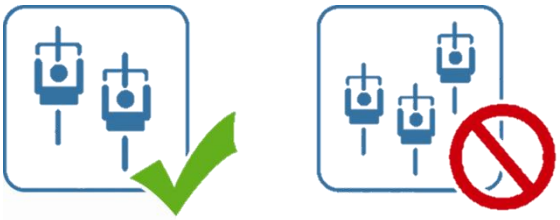
Bikes parked at Garfield Elementary School

Rules on the Road: In Plain English

If you are interested in the formal bicycle traffic rules, please see the Codified Ordinances: Part 3, Title 9, Chapter 373. If you are not in the mood to investigate our Codified Ordinances (we don't blame you), see below for the rules explained in plain English:

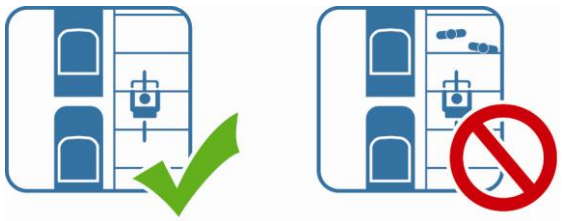


If you are riding in the street you are granted **all of the same rights** and assume all of the same duties as the driver of a vehicle.

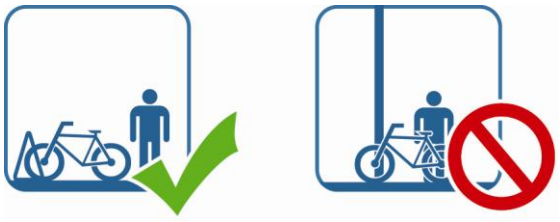


If riding on a roadway, **no more than two people** can ride alongside each other.

If riding on a road, you must ride as near to the right side of the road as possible, **following all traffic rules** and carefully passing parked vehicles.



It is **legal to ride on the sidewalk** if it is not congested.



Your parked bike **cannot block** pedestrian or vehicular traffic.

Your bike has to be **licensed** by the Police Department.

Vision

*The vision of the Bicycle Master Plan is to establish bicycling as a **main means of transportation** and accommodate current bicyclists' needs through policies, programs & projects.*

Goals

- Explain the existing cycling framework in Lakewood.
- Identify an action plan to improve safety and mobility for cyclists.
- Earn national recognition as one of the most bicycle friendly communities in the country by 2015.

What do we need?

Bicycling is transportation.

Image Source: Critical Mass Cleveland

Action Plan

Objectives to Achieve **Now**

Our plan addresses three actionable items to achieve now, that together will establish a comprehensive cycling network, because ***bicycling is transportation in Lakewood****.*

Expand Our Supply of Bike Racks

A bike rack implementation program provides employees, students, families, business patrons and all residents access to ample bike parking which will be inherently embedded within the city framework.

Establish Our Primary Bikeway System: Share the Road

A bikeway network will send a clear message to both bicyclists and motorists that road space is to be used by everyone.

Educate and Reach Out

“Rinse, lather, and repeat.” As the saying goes, we will educate, raise awareness, and continually remind residents that bicycling is transportation through directed programs and initiatives.

Where are we today?

Bicycling is ***alternative*** transportation.

Image Source: Cleveland.com

The Nation At-a-Glance

Travel by automobile is more expensive than ever before.

- Over a 5 year period, the price of gas has **increased by 62%** (Gas Buddy).
- According to the Bureau of Labor Statistics, car ownership costs are the **second largest household expense** in the nation.

Americans are less healthy.

- The obesity rate among adults (age 20 and over) has risen from **23% in 1988 to 34% in 2008**.
- The obesity rate among children has risen from **10% in 1988 to 17% in 2008**.
- Between 1980 and 2009, there has been a **121% increase in the rate of diagnosed diabetes** nationally (Center for Disease Control).

However…

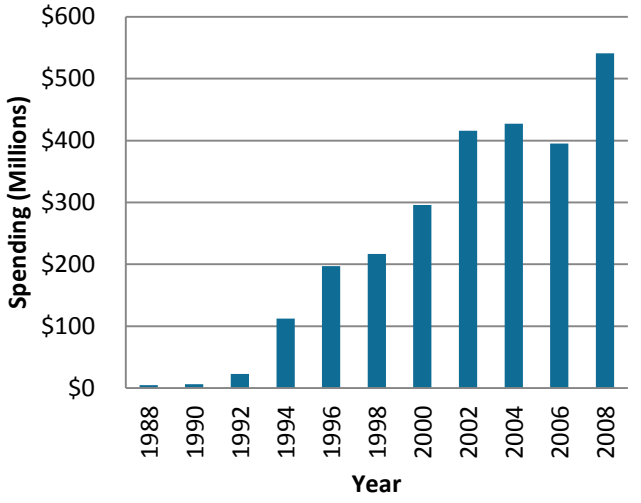
Bicycle commuting is on the rise.

- Between 2000 and 2008, there has been a **43% increase** in bicycle commuters nationally (League of American Bicyclists).

Cities are leading the way in progressive bike planning.

- The 90 largest American cities have constructed over **10,000 miles of bike lanes** total (League of American Bicyclists). That's enough to **span the continental United States nearly four times!**

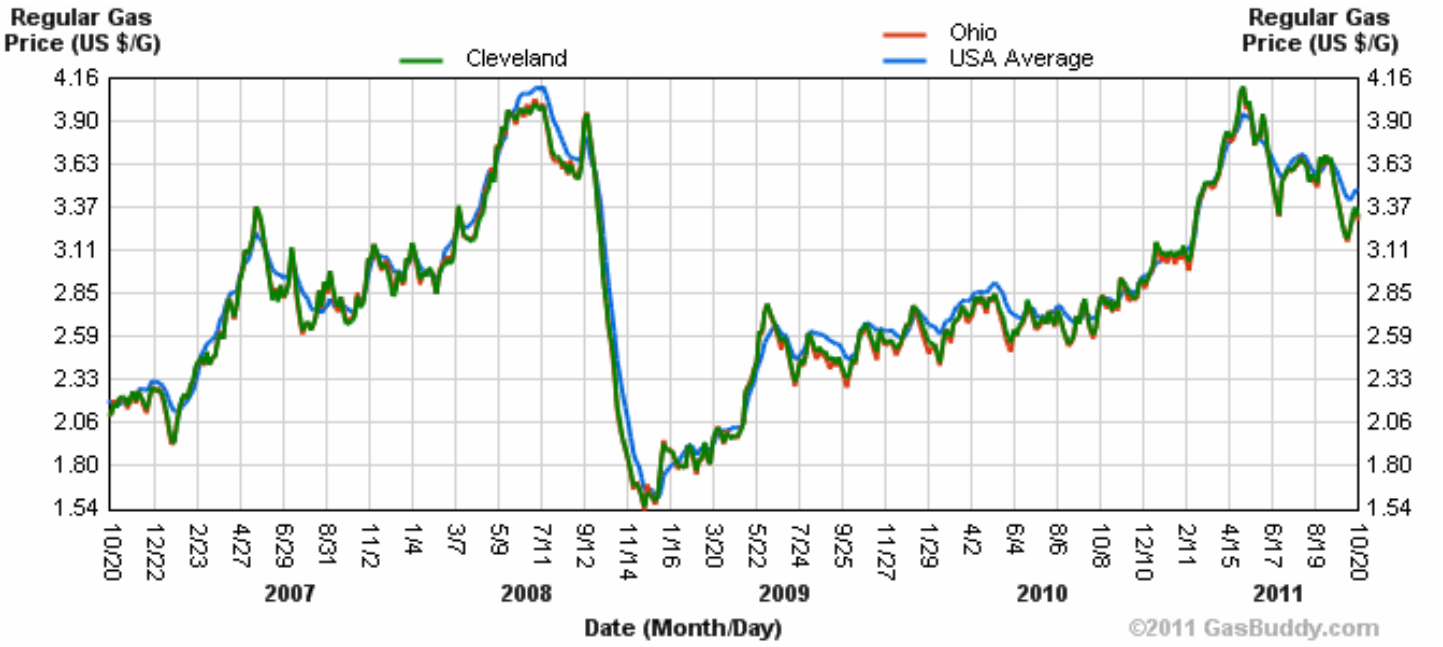
Figure 2.1 | Federal Spending on Bicycle Facilities



The federal government is committed to improving bicycling conditions.

- Between 1988 and 2008, the U.S. Department of Transportation's support for bicycle transportation initiatives has grown from **$4.9 million to $541 million** (League of American Bicyclists).
- On January 1, 2009, the **Bicycle Commuter Tax Credit** took effect, allowing employers to reimburse up to $20 in monthly taxes as an incentive for commuting to and from work by bicycle.

Figure 2.2 | National, State and Local Gas Prices



Bicycle commuters in Downtown Minneapolis

Sharrow markings in Seattle

Case Study: Seattle and Minneapolis

Minneapolis

Minneapolis launched the first large-scale bike-sharing system in U.S., called Nice Ride, providing some of the nation's finest network of off-street bike trails. This year the city is adding 57 new miles of bikeways to the 127 miles already built. With more than half of the local bikeways on the streets, safe connections are inherently integrated within the transportation network.

Seattle

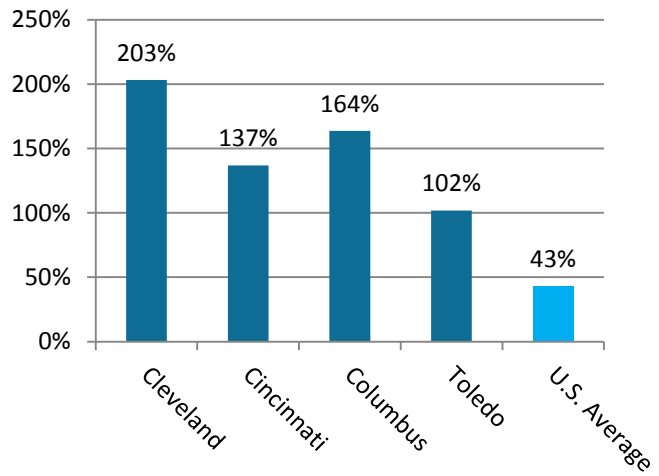
It is estimated that about 36% of Seattle's 520,000 citizens engage in recreational bicycling, and between 4,000 and 8,000 people bicycle commute in Seattle each day. Seattle has about 45 miles of shared use paths, 120 miles of bikeways, and about 120 miles of signed bike routes. In the past two years 429 bike racks have been installed, including 3 on-street bike corrals.

Ohio At-a-Glance

Ohio's major cities are witnessing a dramatic increase in bicycle commuting.

- Between 2000 and 2008, all of Ohio's major cities witnessed an increase in bicycle commuting that **far outpaces** the national average. (See Figure 2.3)

Figure 2.3 | Change in Bicycle Commuting (2000-2008)



Bike plans are underway in Ohio's major cities.

- The *Bicycle Master Plan* for the City of Cincinnati, approved in June 2010, plans to add **445 miles of on-street and off-street bicycle facilities by 2025** (City of Cincinnati).
- The *Columbus Centennials Bikeways Plan* calls for more than **500 miles of bicycle facilities** by 2018, as well as a comprehensive bike-sharing program, and a downtown bike station (City of Columbus).

Bicyclists in Downtown Cleveland

Northeast Ohio At-a-Glance

Northeast Ohio Areawide Coordinating Agency (NOACA)

Regional Bicycle Transportation Plan

The **Northeast Ohio Areawide Coordinating Agency (NOACA**), as the Metropolitan Planning Organization representing Cuyahoga County, is responsible for comprehensive cooperative and continuous planning for highways, public transit, and bikeways. In its **Regional Bicycle Transportation Plan**, adopted in 2008, NOACA focuses on promoting bicycling as a viable form of transportation and making the construction of more bikeways a priority. NOACA will conduct bicycle workshops and training sessions, produce and distribute bicycle maps, campaign to motivate municipalities to become bicycle friendly communities, and make recommendations to transportation construction projects to ensure bicyclists are accommodated within the project (NOACA).

NOACA has identified the following goals which it aims to accomplish by 2030:

- Create a regional network of safe bikeways and supporting bicycle facilities.
- Increase bicycle planning and provision of facilities at the local level.
- Increase bicycle ridership in the region, in particular, for transportation.
- Promote safer bicycling in the region and reduce accidents.
- Encourage involvement of the private sector and other support for bicycling for transportation and recreation.

In addition to NOACA's efforts, the **Towpath Trail**, which connects numerous historic sites along the Ohio and Erie Canal, is a destination for bicyclists of all backgrounds. Through a multi-agency planning effort involving the Cuyahoga County Planning Commission, the Greater Cleveland Metroparks, and the National Parks Service, recent improvements have increased bicycle safety along the trail. Among these efforts include a four-stage **Trail and Greenway Extension:**

- **Stage 1 (Construction to begin in 2015):** A three-quarter mile section from old Harvard Road to the south entrance of the Steelyard Commons shopping center.
- **Stage 2 (Completed in 2007):** A one-mile section that is part of Steelyard Commons.
- **Stage 3 (To begin construction in 2012):** A section from the north entrance of Steelyard Commons to the vicinity of Literary Road (north of the I-490 bridge).
- **Stage 4 (Construction to begin in 2013):** The final section which will bring the project to Canal Basin Park, a new 18-acre urban park to be created at the northern terminus of the Ohio & Erie Canal.

For additional information on the Towpath Trail, click here.

Similar Communities: Shaker Heights and Cleveland Heights

Shaker Heights and Cleveland Heights are both inner-ring suburbs of Cleveland with similar built environments to that of Lakewood. In 2008, The City of Shaker Heights in collaboration with **Northeast Ohio Areawide Coordinating Agency (NOACA)** developed a **citywide Bike Route Plan**. This plan identifies a **network of on-road bike routes that connect major destinations in the City,** such as parks, schools, and shopping areas (The City of Shaker Heights).

Similarly, the **City of Cleveland Heights in partnership with University Circle** is undergoing a **Bicycle Network Study** and was recently awarded $115,000 in funding from NOACA to support the plan (*Cleveland Heights*).

City of Cleveland

Bikeway Master Plan

The City of Cleveland adopted a Bikeway Master Plan with following goals:

- Increase Bike Ridership
- Connect Neighborhoods to the Lakefront and Cuyahoga Valley
- Link Parks and Open Space
- Create a 180-mile Network of Shared Roadways, Bike Lanes and All-Purpose Trails
- Build a Better Transportation System
- Increase Awareness of Bicycle Safety
- Improve the Health of Clevelanders
- Improve Air Quality and the Environment of Cleveland

The plan proposes a **180 mile** network of bike lanes, bike paths and multipurpose trails (City of Cleveland).

- **Existing**: the Lakefront Bikeway, Harrison-Dillard Bikeway, Euclid Avenue Bike Lanes, Morgana Run Trail, Treadway Creek Tail & Greenway, Garfield Park Reservation, and Rocky River Reservation.
- **Proposed:** the City Loop Trail, Lake to Lakes Trail, Hogsback Lane, Kingsbury Run, Lower Big Creek Valley Greenway, Train Avenue Trail & Greenway, Lower Euclid Creek Greenway, Downtown Bike Station, Bike Lanes, Sharrows.

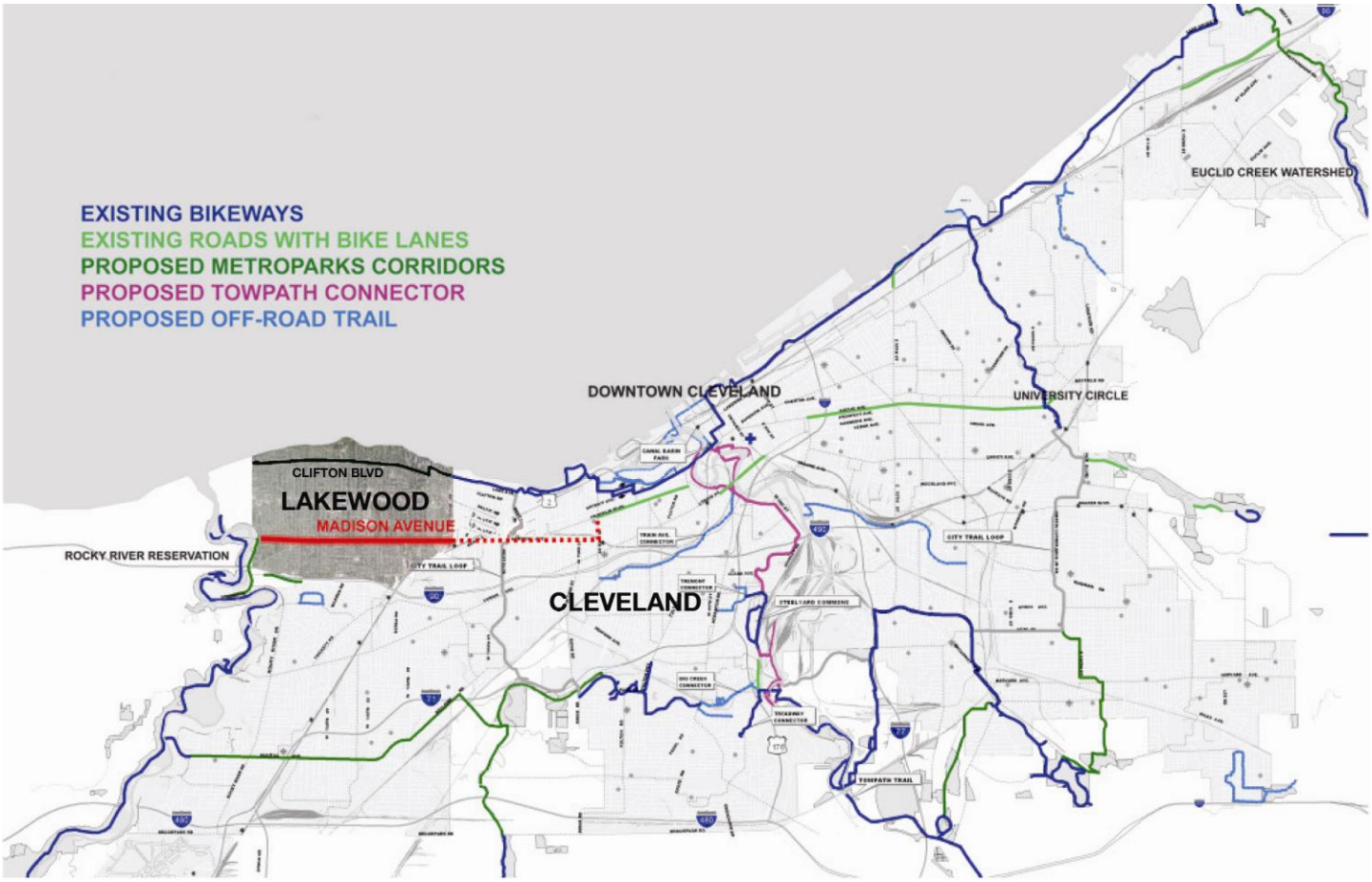
For additional information regarding the city's bicycle plan, click here.

Complete Streets Ordinance

In September 2011, Cleveland City Council approved of a *Complete Streets* ordinance requiring that 20% of money spent on road projects go to features such as bike-only lanes, crosswalks, energy-efficient lighting and porous pavement. The law will take effect on January 1, 2012 (*Cleveland council*).

Other community bike plans include the Heights Inter-Community Bikeway Route System, Oakwood Village multipurpose path system, Solon Bikeway System, City of Berea bike routes, Westlake Hilliard bicycle lane, and the Beachwood multipurpose path.

Figure 2.4 | Cleveland Bike Map



Lakewood At-a-Glance

Lakewood residents utilize their bicycles for a variety of purposes and intentions. This is best described in the form of three types of cyclists:

1. **Commuter rider:** a bicyclist who utilizes his or her bike as a means of travel to or from work or school.
2. **Utilitarian rider:** a bicyclist who utilizes his or her bike for running errands.
3. **Recreational rider:** a bicyclist who utilizes his or her bike for exercise purposes.

Detroit Avenue is both a destination for bicyclists and a frequently used route for commuters and utilitarian riders but lacks consistent, good quality bike parking. Lake Avenue and Clifton Boulevard see most of their bicycle traffic for recreational purposes and for the most part at times other than rush hour.

Existing Conditions

Survey Findings

The following information was gathered through public input at a community meeting on October 5, 2010. For additional information and maps, please see the Appendix.

Often Used Entry/Exit Points for Lakewood
Edgewater & 117th
Lake & 117th
Clifton & 117th
Detroit & 117th
Franklin & 117th
Madison & 117th
Detroit to Rocky River
Intersection at Riverside/Hilliard/I-90/Marginal
Entrance to Rocky River Reservation at Detroit
Entrance to Rocky River Reservation at Hogsback Lane
Berea Road and 117th

Difficult & Challenging Intersections when Bicycling
Madison/Hilliard/Carabel
Warren & Madison
Warren/Franklin/Hilliard
Madison & 117th
Franklin & 117th
Detroit & 117th
Clifton & 117th
Franklin & Bunts
Detroit & Warren
Detroit & Metroparks Drive
Detroit & Manor Park
Belle & Clifton
Belle & Lake
Lakewood Height and Berea Road
Berea Road to West 120 (the back way into Target and Giant Eagle)

Roads Frequently Used for Bicycling*
Detroit
Franklin
Clarence
West Clifton
Madison
Athens
Edgewater (East of Lakewood Park to Nicholson)
Delaware
Clifton (non-rush hour)
Westwood/Summit/Morrison
Arthur
Berea Road
Lake (non-rush hour)
Belle
Riverside

*Non-rush hour are the times 10am – 4pm Monday through Friday

Lakewood Cyclists

Results from 2010 Surveys

From the ***Bike Community Survey***, here is what we know:

- All age groups in Lakewood bike
- Most residents ride for "recreation/pleasure"
- Most residents bike 1-4 times per week
- Lake, Clifton & Detroit are the streets most frequently biked

From the ***Bike and Walk to School Parent/Caregiver Survey***, here is what we know:

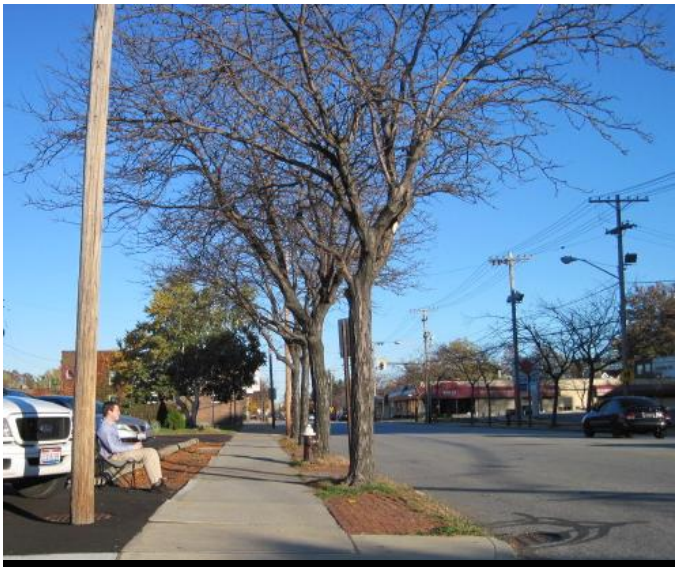
- Most students travel less than 1 mile to school daily
- Almost ¼ of students bike to school daily
- Most students walk/bike to school without an adult beginning in 3rd & 4th grade
- Most students who bike to school wear helmets
- The top three concerns parents have about the commute to school are (1) the amount & speed of traffic, (2) weather/climate, and (3) crossing intersections

Signage

To date, the City of Lakewood provides signage on portions of Franklin Boulevard and Madison Avenue. These are located along the western edge of Madison Avenue near Riverside Drive and along the eastern edges of Madison Avenue and Franklin Boulevard near West 117th Street.

Schools & Children

From the two recent surveys conducted (attached in the Appendix), it is evident **school-age children in Lakewood represent a large portion** of bicyclists in our community. Lakewood Public Schools are committed to bicycle safety; however, a comprehensive bicycle education strategy does not exist. Given the lack of a district-wide school bus system and the proximity of children to their respective schools, bicycling remains a primary mode of transportation for students.



Planning and Development staff counting bicycle and pedestrian traffic along Detroit Avenue

Figure 2.5 | Detroit Avenue Bike & Pedestrian Traffic Counts (2010)**

**Counts completed by Planning and Development staff and accounted for all bicycles and pedestrians entering the intersection from all directions.
AM counts = 7:00 – 10:00 AM | PM counts = 3:00 – 6:00 PM

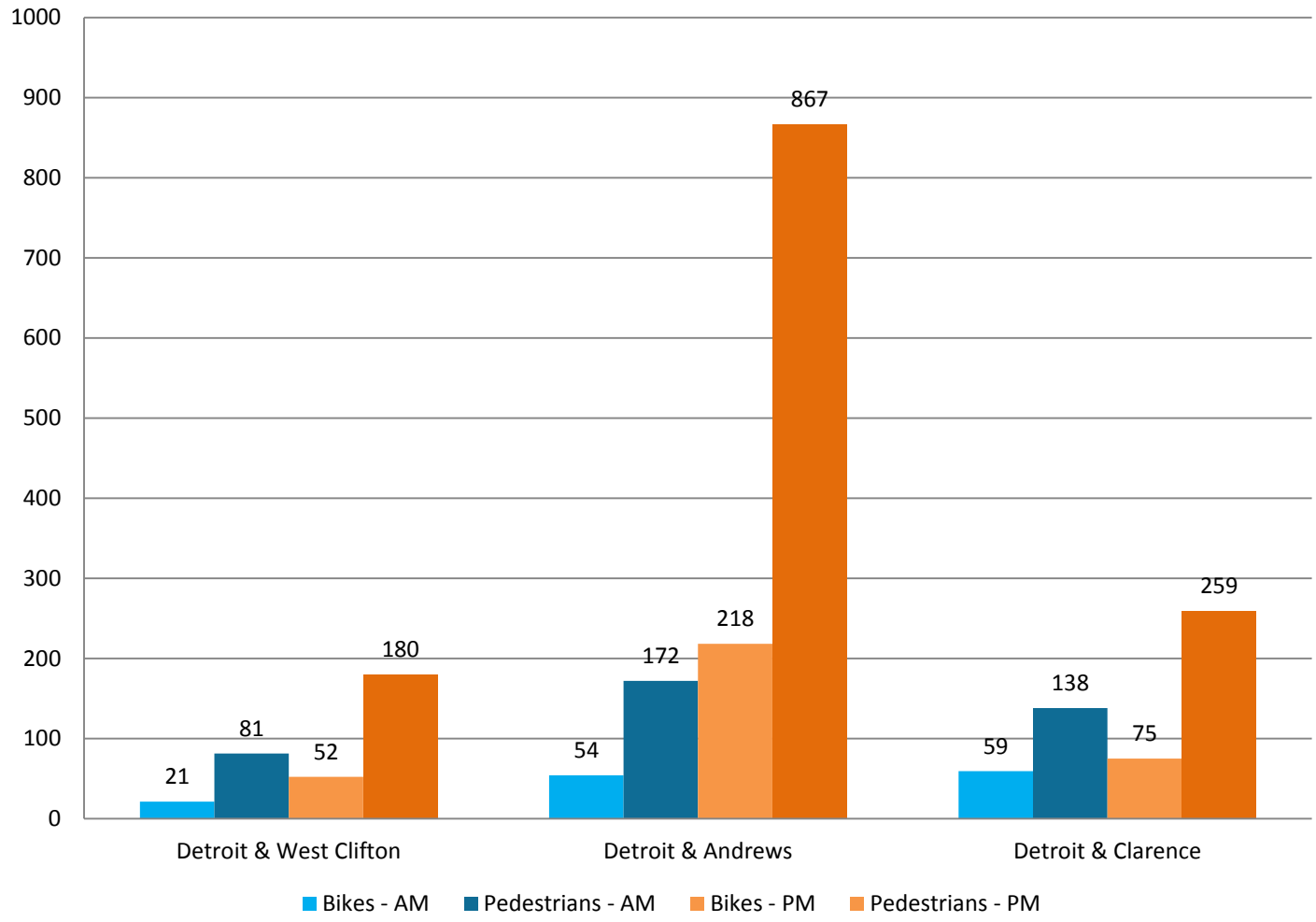



Image Source: Cleveland.com


Image Source: Meanderings.me

Lakewood ranks #1 in Ohio for resident bike commuters in cities with less than 100,000 residents.

People of all ages and backgrounds bike Lakewood.


Image Source: Flickr

Most surveyed residents **bike 1-4 times per week.**

Existing Conditions

Continued from Page 16

Bike Accidents

In 2010, there were just fewer than 50 recorded bike accidents throughout Lakewood, **none of which were fatal.** The majority of these accidents occurred along Detroit Avenue and Madison Avenue, both commercial corridors where bike travel is frequent. For additional information, please see the map of bike accidents in the Appendix.

Bicycle Parking

Presently, bicycle parking throughout the city ranges from sites with ample parking to sites with limited or no parking. Areas that supply the most parking include recreational and institutional facilities such as the YMCA, Lakewood Library and the schools, while businesses along Detroit Avenue are considered to have little or no dedicated bike parking. **Figure 2.6** (next page) shows a map of frequent destinations throughout the city which are rated based on their availability of bicycle parking. These destinations and ratings were determined based on input provided from the first community workshop on October 5, 2010.

There is a shortage of bike parking throughout Lakewood.

Relationship to Other Plans

Lakewood Community Vision (1993)

The *Lakewood Community Vision*, adopted in 1993, recommends the hiring of a Cycling Coordinator and/or open-space planner as on one of its "Long-Term Priorities" (within the next five or more years OR from 1998 onward) (City of Lakewood). Additionally, the plan

The City adopted a Parks System plan in 2010.

recommends that city develop a transportation strategy, which would require additional planning studies. To date, the City does not have a Cycling Coordinator or open-space planner on staff. For additional information, please consult Chapter IV.B.3 of the *Lakewood Community Vision* by clicking here.

NOACA Regional Bicycle Plan (2006)

The *NOACA Regional Bicycle Plan* identifies both Clifton Boulevard and Detroit Avenue as "priority roadways" in Appendix G of the document (NOACA). However, the plan does not propose any new bicycle facilities within Lakewood. For additional information, please consult the *NOACA Regional Bicycle Plan* by clicking here.

Parks System Strategic Plan (2010)

The *Parks System Strategic Plan*, adopted in 2010, considers the City's parks as a system, not just individual parks, and works toward consistency in appearance, maintenance and improvement design. The plan outlines an on-going community input process, articulates a clear vision and recommends implementation of strategic park improvements over a 5-year timeline (City of Lakewood).

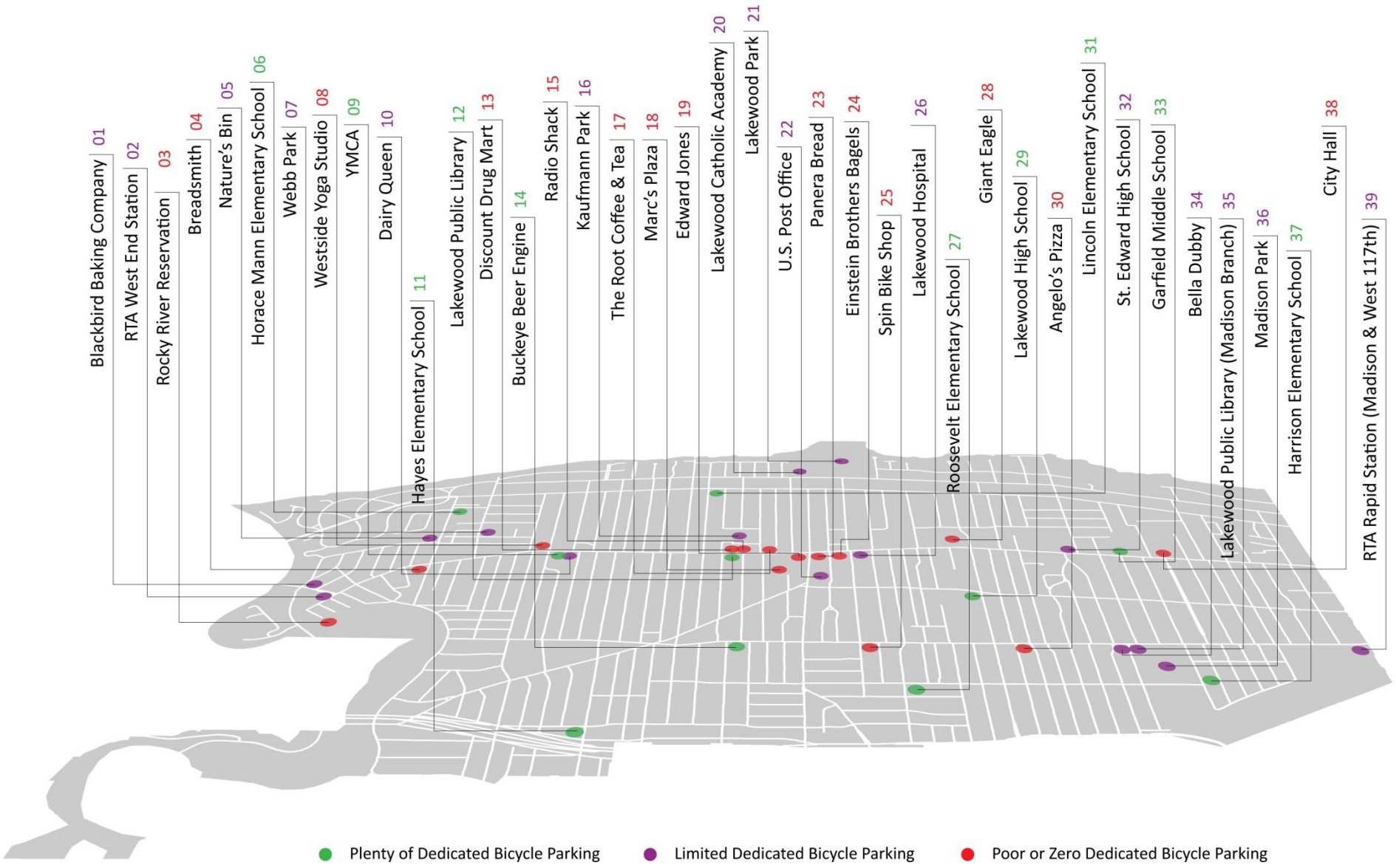
In the section of plan titled "Improvement Recommendations", the plan recommends the following improvements for bicycle trails and facilities over the next three (3) to five (5) years:

- **Connectivity Planning:** Assessment of current inter-park connections and develop linkages.
- **Bikeway Planning:** Develop City wide bikeway routes with parks as destinations and hubs.

For additional information, please consult the *Parks System Master Plan* by clicking here.

Figure 2.6 | Frequent Destination for Bicycle Parking

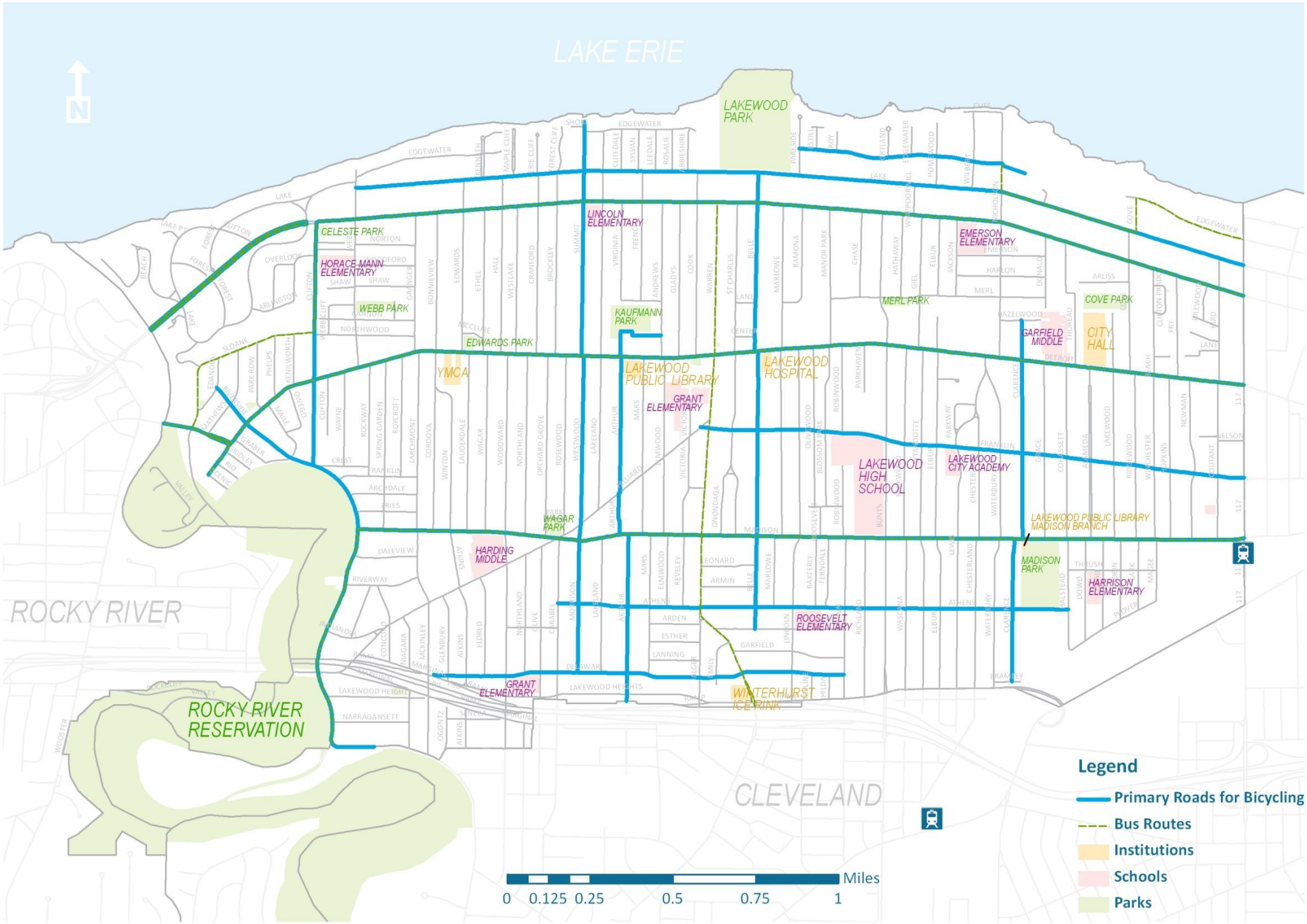
The following map rates local destinations based on their supply of available bicycle parking.



How will you bike Lakewood?

Proposed Improvements

Primary Roads for Bicycling



Expand Our Supply of Bike Racks

A bike rack implementation program provides employees, students, families, business patrons and all residents access to ample bike parking which will be inherently embedded within the city framework.

Improve Bike Parking Options in Our Commercial Districts

Planned & Proposed Bike Parking

- One rack for every block on Detroit.
- One rack for every other block on Madison.
- Cost-sharing partnership with businesses for bike corrals.

Types of Bike Racks

- **Inverted "U" Bike Rack** – a U-shaped rack which provides good support to the bicycle, and users are able to lock both the wheels and frame of the bicycle to the rack.
- **"Post and Ring" Bike Rack** – a rack which features 2 points of stability and locking for added security. These racks can secure two bikes in a small amount of space.
- **Custom-design Bike Rack** – any other bike rack which does not fall into the category of an inverted "U" rack or "Post-and-Ring" rack. These types of are permitted on a case-by case basis.
- **Bike Corral** – an on-street set of racks which make efficient use of the parking strip for bicycle parking in areas with high demand. Corrals typically have 6 to 12 bicycle racks in a row and can park 10 to 20 bicycles. This uses space otherwise occupied by one to two cars.

Develop "Pro-Bicycle" Parking Requirements

Proposed Bike Parking Ordinance

In addition to the recommended bike parking improvements, the city shall revise the current Codified Ordinance to require bicycle parking in commercial districts. This in turn will make bike parking the rule, not the exception, for all new development in Lakewood.

Inverted "U" Bike Rack

"Post & Ring" Bike Rack

Custom-design Bike Rack

Bike Corral

Establish Our Primary Bikeway System: Share the Road

A bikeway network will send a clear message to both bicyclists and motorists that road space is to be used by everyone.

Identify All Types of Bikeways

What is a bikeway?

A bikeway is a street specifically enhanced to accommodate bikes safely and efficiently and is shared with all other modes of transportation.

What types of bikeways exist?

- **One-Way Lane** – a portion of a street reserved for use by bikes only on one side of the street and running in one direction, usually made distinct by a stripe of paint and signage.
- **Two-Way Lane** – a portion of a street reserved for use by bikes only on both sides of the street and running in both directions, usually made distinct by a stripe of paint and signage.
- **Shared Use Lane** – a facility where markings are present to inform motorists that they must share the road with bicyclists. These are typically marked with shared lane markings, or "sharrows".

Develop a Network Composed Entirely of **Shared Use Lanes.**

Given that Lakewood's streets are not wide enough to accommodate segregated bicycle lanes, the best and most practical option are shared use lanes. Our vision maximizes Lakewood's potential to be one of the most bike-friendly communities by 2015.

How does a Shared Use Lane work?

A shared use lane informs motorists that bicycles and cars travel together. A shared lane marking or a "sharrow" is placed within the traffic lane. These white markings are approximately three feet wide by eight feet tall and are placed no further than 250 feet apart from each other (San Francisco Department of Transportation).

Where have Shared Use Lanes worked?

- Minneapolis, which was recently named the **most bicycle-friendly city** in the country, has **over 57 miles** of shared use lanes as a part of its bicycle master plan (*Bike Walk Twin Cities)*.
- Columbus, Ohio installed its first sharrow along High Street, it main commercial corridor, in May of 2010. In addition, **the city will be installing 188 more sharrow markings** in the coming months.

Sharrows being unveiled on High Street in Columbus

How will signage encourage sharing the road?

Currently, Lakewood is underserved by bicycle signage. Using a custom design (pictured below), our plan will require that signage be present wherever bike racks are located throughout the city. This will not only inform bicyclists of parking locations but will also notify motorists that road space is to be used by everyone.

Bike Parking Sign (Proposed)

Educate and Reach Out

"Rinse, lather, and repeat." As the saying goes, we will educate, raise awareness, and continually remind residents that bicycling is transportation through directed programs and initiatives.

Partner with Our Police Department to Encourage Bike Safety

Proposed Enforcement Guidelines

- Pro-actively enforce traffic laws relating to bicycle safety, while at the same time, emphasizing education initiatives.
- Conduct multiple Bicycle Enforcement Studies by choosing a widely used bicycle intersection and enforcing bike laws.
- Enforce bicycle registration requirements.

The City may propose that following bike violations have a fee:

- Failure to obey traffic direction
- Wearing headphones
- No headlights

Police officers in California direct children and their bikes

Integrate Our Public Transit System with Our Bike Network

Linking RTA with Bicycle Network

RTA allows transit riders to bring their bikes with them onboard the train or bus. Currently, the city is serviced by three bus lines (55, 26 and 25) as well as two rapid rail stations (Madison & West 117th and Triskett). By expanding the bicycle network to run along streets where these bus lines and rail station exist, the city aims to encourage multi-modal transportation.

RTA buses can accommodate bicyclists

Expand Our Education and Outreach Programs

Proposed Programs for Education

The Department of Planning will partner with Lakewood Public Schools to adopt a bike education program for all schools to follow. Primarily the education program will create further awareness about bike safety with our youth, with the goal of instilling the importance of following rules on the road at an early age. Our youth will educate the community at-large about our bike network by following the rules and leading by example.

Outreach Initiatives

A public outreach "campaign" must be undertaken in order to promote bicycling. Using the city's current resources and partnering with local businesses and non-profits, the City proposes the following outreach initiatives

- **Billboards:** The city will promote bicycling through a unified message to "share the road" utilizing its existing city-owned billboards.
- **Bike Maps:** An effective tool for informing residents of the City's bicycle network, bike maps will be distributed to businesses, institutions and public facilities.
- **Mural:** Lakewood will establish itself as the "Bicycle Capital of Northeast Ohio." See mural below.
- **Promotional Materials:** T-shirts and bumper stickers.

Continue onto the next page for examples of the proposed outreach initiatives.

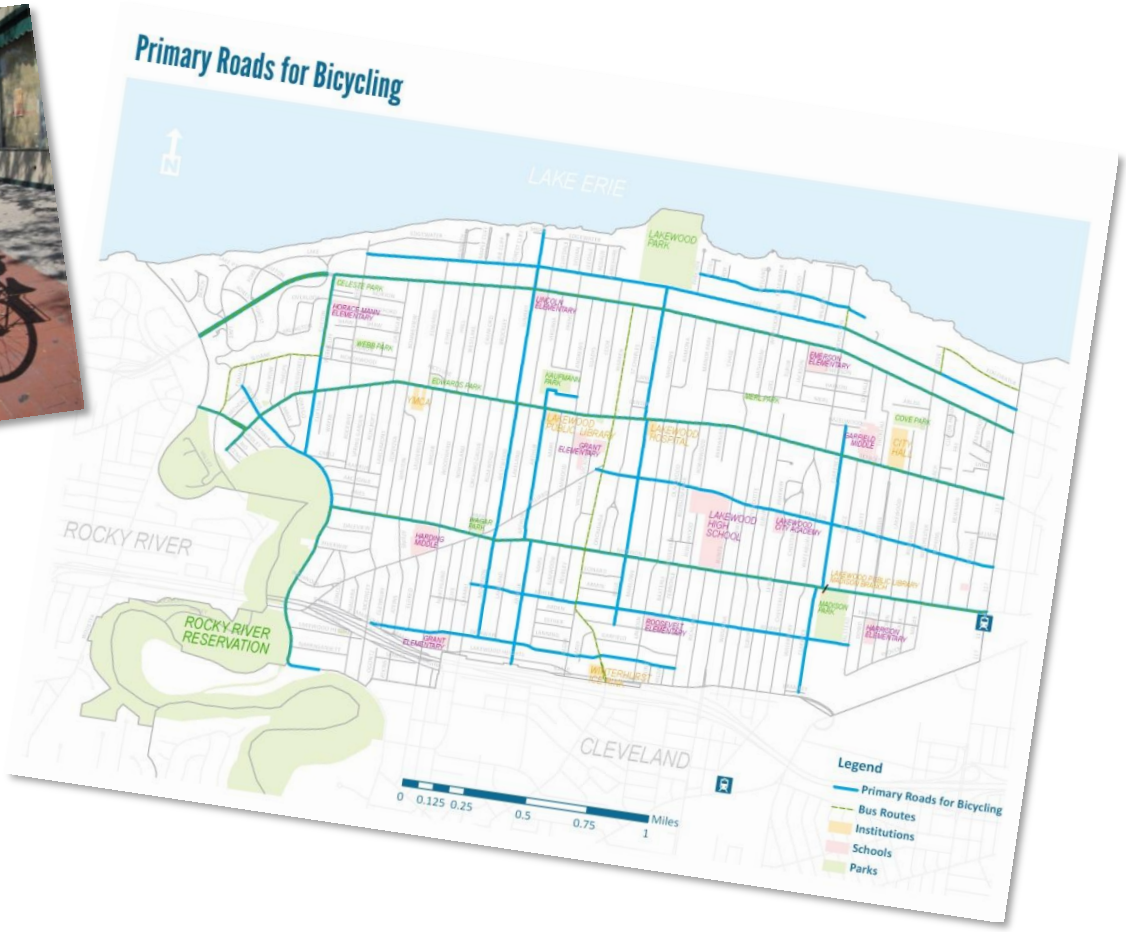
Educate and Reach Out

Billboards

Before

After

Bike Maps



Mural: Lakewood as “The Bicycle Capital of Northeast Ohio”

Before

After

Promotional Materials: Bumper Stickers and T-Shirts

A Closer Look: Madison Avenue Re-Configuration

Madison Avenue is 2.7 miles from West 117th to Riverside. The proposed reconfiguration of the Avenue would improve the multi-modal use of the corridor and create a safer and more effective variety of transportation options, Walk, Bike, Drive, Bus, & Train. All of these options are currently not possible due to the existing condition and configuration of Madison Avenue. The improved corridor would connect the West 117th Rapid and Bus Station on the east end with Riverside Drive and the Rocky River Reservation on the west end.

Madison Avenue in its current condition

Madison Avenue by the Numbers

Schools (Enrollment)

Due to Lakewood not having a school bus system, many students travel to school by walking, biking or using public transportation. Thousands of students commute via the Madison Corridor on a daily weekday basis from September through June. Counting morning and afternoon trips equals more the 6,000 daily trips for the four schools on and around Madison.

- Lakewood High School (Bunts and Madison): **1900**
- Harding Middle School (Madison and Wagar): **675**
- Harrison Elementary (One Block South of Madison on Quail): **450**
- Roosevelt Elementary (One Block South of Madison on Athens): **300**

Library (Average Weekly Visitors)

- Lakewood Public Library (Madison Branch): **3,800-4,000**

Parks

Three city-owned parks directly front on the corridor and Cleveland Metroparks Rocky River Reservation via Riverside Drive is the western terminus

Madison Park

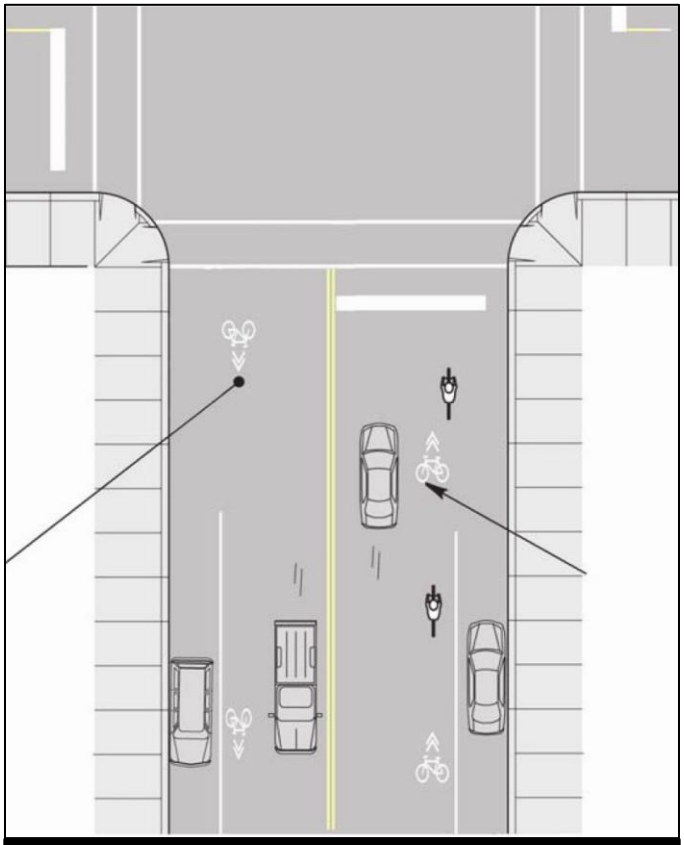
- Total size: **17 acres**
- Madison Park Pool Number of Visitors: **22,544 (June-Labor Day)**

Rocky River Reservation

- Total lengths of All Purpose Trail (APT): **13.6 miles**
- Total visitation including commuter traffic: **8,144,156**
- Total visitation for recreation purpose: **3,970,915**

RTA Rapid (Madison and West 117th Station)

- Total Daily Ridership (2010): **1,200 to 1,800 (boarding and arrivals)**
- Total Weekly Ridership (x5 – Business Week): **6,000 to 9,000**
- Totals Annual Ridership (x52): **312,000 to 468,000**



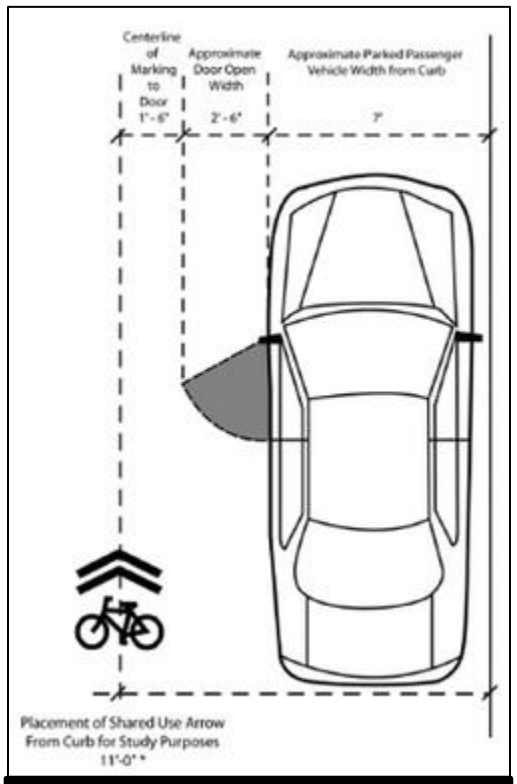
Proposed Sharrows along Madison Avenue

Design Guidelines & Standards

Design Guidelines & Standards

Design Standards for Shared Use Lanes

The Ohio Department of Transportation (ODOT) establishes standards for the design and configuration of bicycle facilities. For a complete description of the design standards for the design of bicycle facilities, please click here.



Shared Use Lane Configuration

Design Standards for Signage

The City of Lakewood will consider both the signage design standards established by ODOT as well as proposed bike parking signage for both Detroit and Madison Avenue.

ODOT Design Standards

ODOT establishes standards for the design and configuration of bicycle signage. For a complete description of the design standards for the design of bicycle facilities, please click here.

Signage Approved by the Ohio Department of Transportation (ODOT)

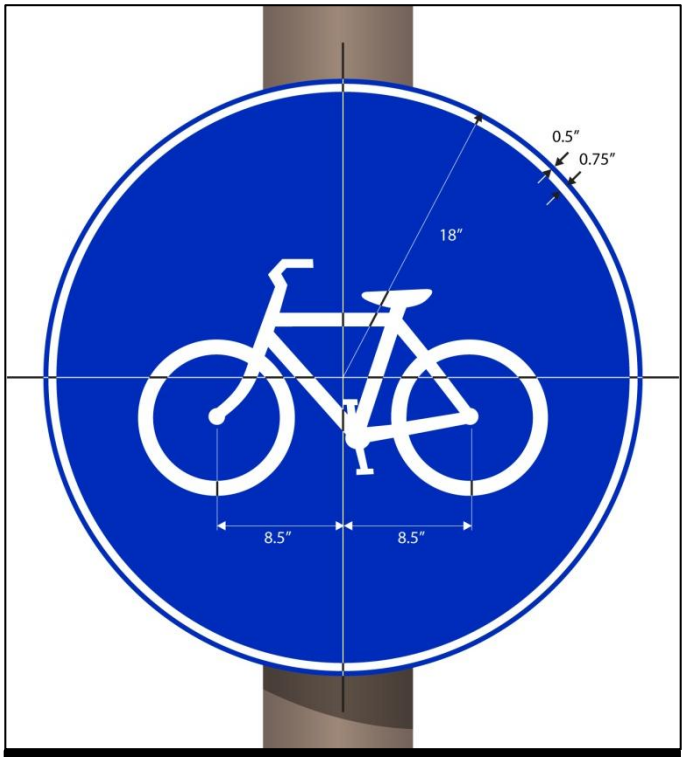
- **Bicycle Warning Sign** – This sign alerts motorists that bicyclists may be present on a roadway. Also optional is a yellow "share the road" sign which sits beneath it.

Bike Parking Sign Design Standards

The City of Lakewood requires that the following standards be followed for the design, installation, and upkeep of bicycle parking signs:

Signage Proposed by the City of Lakewood

- **Bike Parking Sign** – This sign is inspired by bicycle signage in the Netherlands and would alert bicyclists of bicycle parking throughout the city.



Bike Parking Sign Design Standards

Bike Rack Installation Guide

In response to the growing number of persons using bicycles as a primary means of transportation and for recreation, the City of Lakewood seeks to facilitate and encourage the use of bicycles throughout the city.

In partnership with Lakewood Businesses, The Department of Planning has established criteria for including bicycle parking for residents.

The following guidelines detail the best and required configuration for bicycle parking, so as to efficiently and

effectively use available space for cyclists and pedestrians alike.

This guide will help you navigate the city's requirements and recommendations for bike parking; please contact the Planning and Development Department at 216-529-6630 for consultation and guidance in the permitting process.

Objectives

To provide ample parking for cyclists in proportion to parking for motorists
To provide safety of public and private property, for cyclists, motorists and pedestrians
To enhance the streetscape and livability of the community

Permitted Bicycle Racks

1. Inverted U style rack and Post and Ring (Bollard) style rack: These racks are required in commercial districts. Both types are good for tight spaces and accommodating as many cyclists as possible, and are very cost effective. These racks also offer dual points of contact for a bike frame, which allows cyclists to securely lock their parked bikes. The placement of these racks should be in highly visible places, and should not hinder pedestrian traffic or access in any way. Bike racks cannot be located in front of entryways, bus stops, loading and unloading areas, or any area where they would impede a business or function.

   Cost: Roughly $250/each (Cost of U-Rack)

2. Custom-design bike racks may be considered on a case-by-case basis. These racks should follow the same guidelines as inverted U and Post and Ring racks.

3. On-Street Bike Corrals cost the city or merchants around $3-$4,000 (Cost of Bike Corrals)

Location Restrictions

1. Bike racks cannot be within 5 feet of access to a building, park or pathway.
2. Bike racks must be 5 feet from the corner of two perpendicular connecting streets.
3. Bike racks must be 5 feet from crosswalks.
4. Bike racks must allow for at least 6 feet of open sidewalk area in width.
5. Bike racks cannot otherwise restrict accessibility to right-of-ways and entrances, pose difficulty to such, or present concern to physical safety.

Appendix

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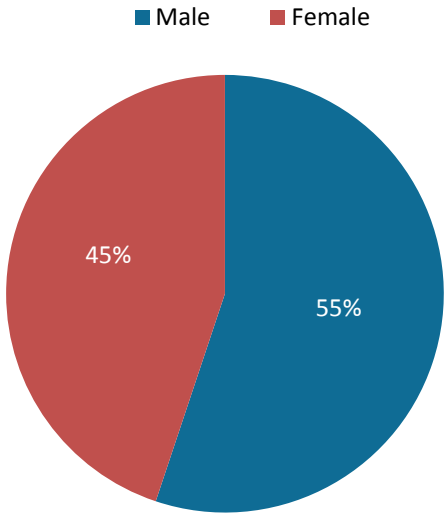
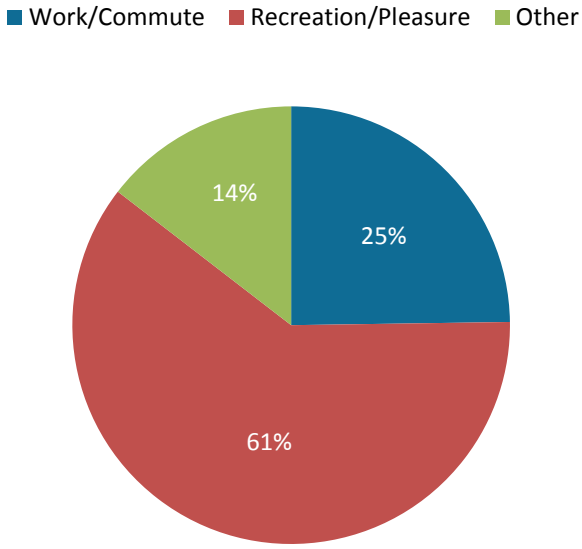
Results from *Lakewood Community Bike Survey*

Total Responses: 205

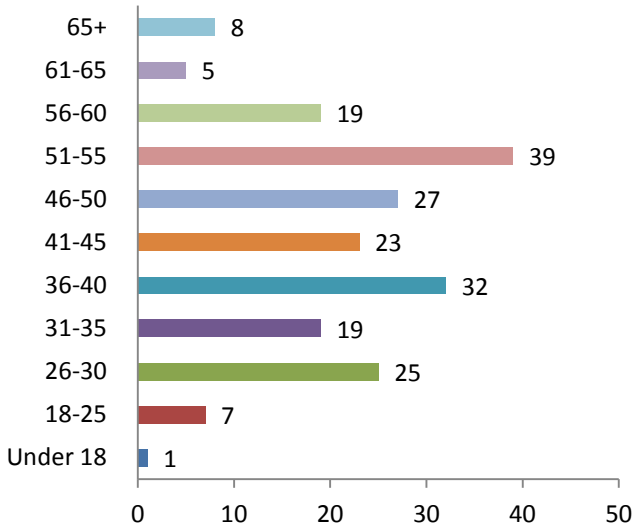
Cyclists by Gender, Lakewood



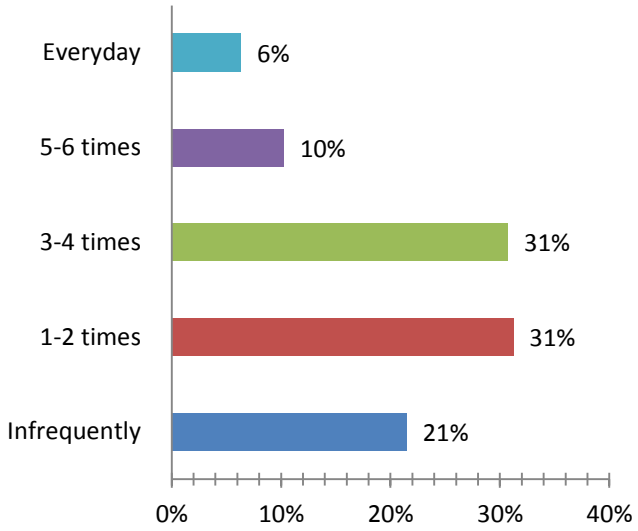
Reason for Cycling, Lakewood



Cyclists by Age, Lakewood



Frequency of Cycling, Lakewood



Length of Residency	
0-2 years	9%
3-6 years	12%
7-10 years	11%
11-15 years	14%
15 + years	50%
Don't live here	5%

Major Streets Used by Cyclists	
Lake	15%
Clifton	15%
Detroit	14%
Hilliard	9%
Franklin	8%
Madison	11%
Athens	4%
W. 117th	2%
Bunts	3%
Warren	4%
McKinley	4%
Riverside	8%
Other	3%

Educational Attainment	
HS/GED	8%
Associate	7%
BA	46%
MA	27%
PhD/JD	6%
Trades/Other	6%

Cyclists by Household Type	
Single-Family	70%
Double	14%
Apartment	11%
Condo	3%
Other	2%

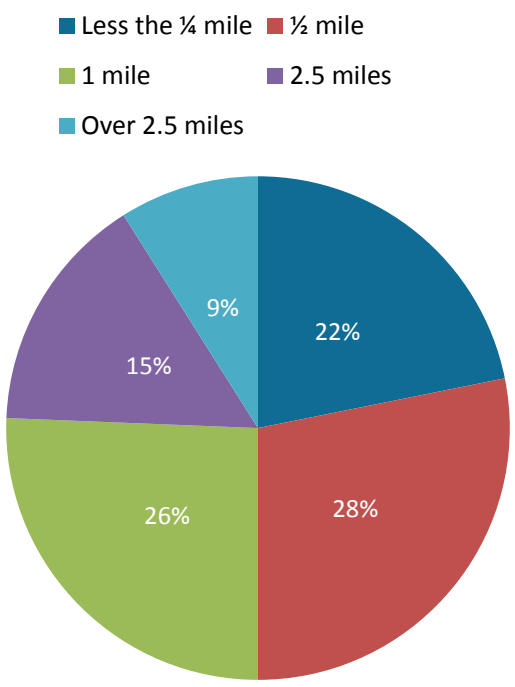
When Cyclists Ride	
Morning	19%
Afternoon	16%
Evening	21%
Weekdays	17%
Weekends	26%

Public Transit Ridership	
Never	83%
1-2 times	12%
3-4 times	2%
5-6 times	2%
Everyday	1%

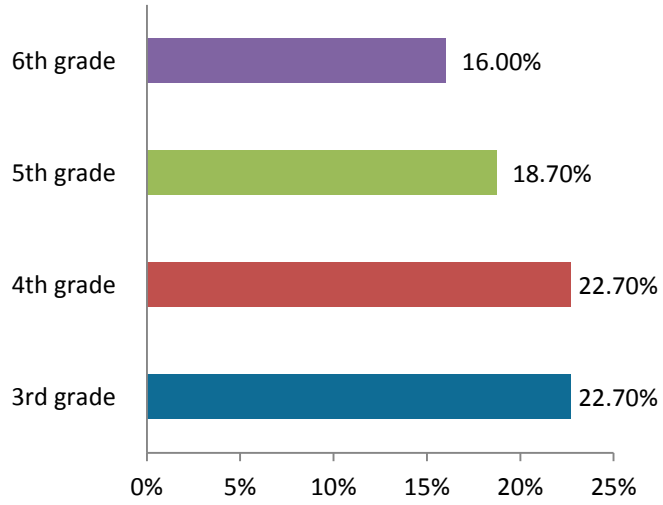
Results from *Bike and Walk to School Parent/Caregiver Survey Summary*

Total Responses: 100

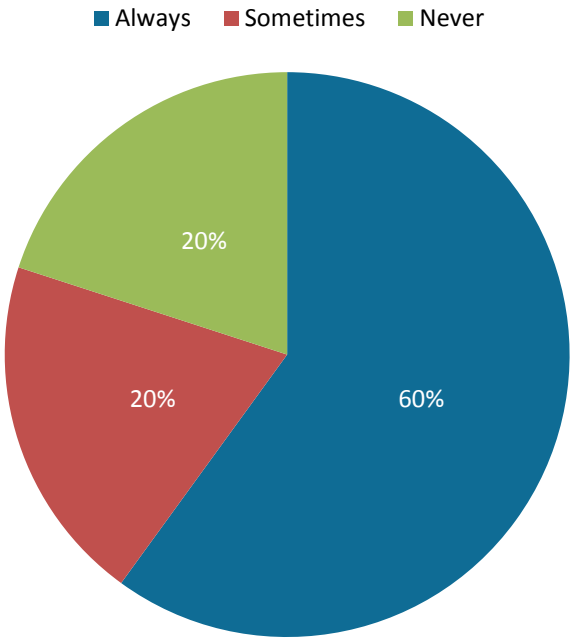
Distance Traveled to School



Age Child First Walked/Biked to School Without Adults



How Often Does Your Child Wear a Helmet?



Mode of Transportation to School (Top 2 Responses)*	
Walk	43.20%
Bike	21.60%

*Other responses included Family Vehicle, Carpool, & Public Transit

Most frequently identified concerns regarding commute to school

1	Amount of traffic along route
2	Speed of traffic along route
3	Weather/Climate
4	Difficult intersection crossings
5	Condition of sidewalk
6	Condition of street
7	Distance


BIKELAKEWOOD
CAPITAL
THE BICYCLE